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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/722,887
Filing Date: November 26, 2003
Appellant(s): LANEY ET AL.

Arthur E. Kluegel
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12 March 2008 appealing from the Office action mailed 05 June 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

The appeal of commonly assigned US Application Number 10/722,886 to Thomas M. Laney et al., which was appealed on 27 February 2008.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. Additional grounds of rejection applied within the Office Action of 05 June 2007 are directed to dependent claims, which are not appealed.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,405,887	Morita et al.	04-1995
5,443,780	Matsumoto et al.	08-1995
6,379,780 B1	Laney et al.	04-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 19 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Morita et al. (US Patent No. 5,405,887).

With respect to Claim 19 and 40, Morita teaches a method of making a porous film by adding from 40-250 parts finely-powdered filler to 100 parts polylactic acid-based resin composition and melting (blending void initiating particles into a melt comprising a polylactic-acid-based material wherein the void initiating particles are employed in an amount of 30-50% by volume in feedstock) (see Abstract). The blend is melt-extruded through a flat die to form an extrudate (extruding the polylactic-acid-based materials as a monolayer film to form a sheet comprising a layer of a polylactic-acid-based material containing inorganic particles) (see col. 7, lines 7-27). The sheet is stretched biaxially from 1.1 to 10 times (stretching the sheet biaxially, in which draw ratios in both the longitudinal and transverse directions are greater than 3 times and not more than 5 times; at least about 3.3 times and not more than 5 times) (see col. 7, lines 28-32), which would necessarily cause the area ratio between the non-stretched sheet and the biaxially stretched film to be in the range of 1.2 to 100 (greater than 10 times and not more than 20 times; at least about 11 times and not more than 20 times). The film would have pores (title). The sheet would necessarily be microvoided and have a total

adsorbent capacity of at least about 14 cc/m^2 principally because its process is the same process as claimed.

Claims 19 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (US Patent No. 5,443,780) in view of Laney et al. (US Patent No. 6,379,780).

With respect to Claims 19 and 40, Matsumoto teaches extruding a film from polyester, specifically extruded polylactic acid, and with biaxial stretching (extruding polylactic-acid based materials as a monolayer film, and stretching the sheet biaxially) (see col. 1, lines 7-9 and col. 4, lines 17-29). Matsumoto's film does not disclose additional layers and is necessarily monolayer as claimed (see col. 1, lines 36-51; col. 3, lines 17-57; and col. 4, lines 17-29). Matsumoto teaches biaxially stretching 2.5 x 2.5 (stretching the sheet biaxially in which both draw ratios in the longitudinal and transverse directions are in the range of 2 to 5 times) (see col. 3, lines 42 and 43).

However, Matsumoto does not appear to explicitly teach that each ratio is greater than 3 times and not more than 5 times or at least about 3.3 times and not more than 5 times, which would cause the area ratio between the non-stretched sheet and the biaxially stretched film to be within the claimed range (e.g., greater than 10 times and not more than 20 times; at least about 11 times and not more than 20 times).

However, in this regard, Matsumoto teaches stretching to improve mechanical strength and change physical properties (see col. 1, lines 15-27). As such, Matsumoto recognizes that the area ratio between the non-stretched sheet and the biaxially stretched film is a result-effective variable. Since the area ratio between the non-

stretched sheet and the biaxially stretched film is a result-effective variable, one of ordinary skill in the art would have obviously been motivated to determine the optimum area ratio between the non-stretched sheet and the biaxially stretched film applied in the process of Matsumoto through routine experimentation based upon reaching increased mechanical strength, which would include the claimed dimensional and area ratios.

Matsumoto does not teach blending inorganic particles into a melt comprising a polylactic-acid-based material or forming interconnected microvoids.

Laney teaches making a layer of polyester film using a mixture of microbeads made of inorganic material and performing biaxial stretching (blending void initiating particles into a melt; extruding said materials to form a layer of material containing inorganic particles by extrusion; stretching the sheet biaxially … to form interconnected microvoids around the inorganic particles, thereby obtaining a permeable microvoided sheet that is a monolayer film of polylactic acid based material) (see col. 2, lines 35-61; col. 4, lines 22-26; col. 11, lines 31-43, and col. 12, lines 23-27). Laney teaches using voiding agents to an extent greater than 30% by volume (wherein the void initiating particles are employed in an amount of 30-50% by volume in feedstock) (see col. 15, lines 30-32).

It would have been obvious to use Laney's teaching for using microbeads in the polyester material taught by Matsumoto because of the absorbency properties which efficiently absorb printed inks without the need of multiple processing steps or multiple coated layers (see Laney col. 2, line 62 through col. 3, line 1). The film would have a

total adsorbent capacity of at least about 14 cc/m^2 principally because is it made by the same process as claimed.

(10) Response to Argument

In Appellant's Arguments section 1, Appellant argues that Morita does not teach the following claimed features: stretching biaxially, that both stretching directions' draw ratios are either between 3 and 5 or greater than 3.3, that the area ratio of the non-stretched sheet to stretched sheet is either between 10:1 and 20:1 or at least 11, that interconnected microvoids are formed around the inorganic particles, and that the sheet has an absorbent capacity of 14 cc/m^2. In response, the Examiner relies on Morita to teach stretching biaxially by the teaching of conducting the stretching biaxially (see col. 7, lines 28-31). The Examiner relies on Morita to teach that both directions' draw ratios are either between 3 and 5 or greater than 3.3 by the explicit statement of stretching from 1.1 to 7 times (see col. 7, lines 28-31). The Examiner relies on Morita to teach the area ratio of the non-stretched sheet to stretched sheet is either between 10:1 and 20:1 or at least 11 via the function of multiplying the stretching of each axis. Specifically, the stretching of up to 10 times is interpreted by the Examiner to be directional in Morita since biaxial stretching is discussed and the ratio stretching is referred to as "successively", which would indicate one direction followed by another direction (see col. 7, lines 28-31). The Examiner relies on Morita to teach that interconnected microvoids are formed around the inorganic particles and an absorbent capacity of 14 cc/m^2 because Morita teaches all the claimed steps for achieving the claimed results of microvoiding and absorbent capacity. Moreover, Morita's product is microvoided and

absorbent since it is permeable and able to absorb moisture (see col. 1, lines 18-27). Furthermore, with respect to the claimed resultant absorbency of 14 cc/m^2, the examiner recognizes that all of the claimed effects and physical properties are not positively stated by the reference(s). Note however that the references teach all of the claimed ingredients, process steps and process conditions and thus, the claimed effects and physical properties would necessarily be achieved by carrying out the disclosed process. If it is applicants' position that this would not be the case: (1) evidence would need to be presented to support applicants' position; and (2) it would be the examiner's position that the application contains inadequate disclosure in that there is no teaching as to how to obtain the claimed properties and effects by carrying out only these steps.

In Appellant's Arguments section 1, Appellant further argues that Morita does not teach the claimed process's resultant absorbency because Morita does not provide an example using the claimed parameters and because Morita is directed to a leakproof material rather than the claimed invention's permeability. The Examiner relies on Morita for all that it teaches rather than individual examples and relies on Morita's teaching of making a product that is permeable and able to absorb moisture (see col. 1, lines 18-27).

In Appellant's Arguments section 1, Appellant further argues that Morita does not teach the claimed method parameters because it would not have been obvious to one of ordinary skill in the art at the time the invention was made to combine the steps in Morita to form a product different from Morita's intentions. In response, the Examiner notes that such discussion of obviousness is moot in view of the claims being

anticipated by Morita in the 35 USC § 102(b) rejection. Moreover, Morita teaches making a product that is permeable and able to absorb moisture (see col. 1, lines 18-27).

In Appellant's Arguments section 2, Appellant argues that it would not have been obvious to one of ordinary skill in the art at the time the invention was made to combine Laney with Matsumoto since Laney is directed to PETG (polyethylene terephthalate) rather than Matsumoto's PLA (polylactic acid). In response, the Examiner notes that Matsumoto is directed to polylactic acid (see abstract), which is a polyester, and is combined with Laney's teaching of using voiding agents in polyester (see col. 2, lines 35-61 and col. 4, lines 22-26). Thus, both references pertain to polyester film fabrication.

In Appellant's Arguments section 2, Appellant argues that Laney is shown to fail in Appellant's Specification, Table 2, Comparative Examples 4 and 5 and that the combined references would be expected to fail to provide a mono-layered film. In response, the Examiner notes that Appellant's Comparative Examples' stretching appears to be on a different material than Matsumoto is relied upon for since Appellant's example uses amorphous polyester "PETG" resin not disclosed to be a PLA polyester resin (see Specification, page 21, lines 6-10 and 19-22) and is thus provides for significantly different results than results from using PLA. It is noted that the Appellant's Table indicates PLA as being successful, and Matsumoto is relied upon for teaching PLA resin (see col. 1, lines 6-9). Matsumoto is the closest prior art and relied upon to show manufacturing a monolayer film. Thus, Appellant's Comparative Examples fail to

use the closes prior art's film material. Moreover, Laney's teaching of using a backing is indicated as being a reinforcement (see col. 3, lines 1-7) which is less critical than Applicant's interpretation of the backing being an absolute in Laney to avoid failure. Additionally, regarding Appellant's Comparative examples, reliance on Appellant's Specification to show an expectation of failure does not overcome the combined references' not teaching failure of the combination. The examples relied upon (see Applicant's comp. ex. 4 and 5) to evaluate Laney are not commensurate in scope with the claims given the claims encompass more than 42% void initiating particles and 69% is outside the claimed range and claims encompass more than barium sulfate and PMMA as void initiating particles.

In Appellant's Arguments section 2, Appellant argues that it would not have been obvious to one of ordinary skill in the art at the time the invention was made to combine Laney's inorganic particles to Matsumoto film composition because it would decrease the strength of the film. In response, The Examiner interprets Matsumoto's teaching of increasing strength to be an indication of how to increase any polyester film product—by stretching it (see col. 1, lines 20-23)—rather than excluding films above the strength provided by Matsumoto's examples or excluding modifying the film to benefit from the modifications such as obtaining a permeable microvoided sheet. Moreover, although the voids may not be relied upon for strength given their absence of material, the arguments of counsel regarding the strength of the voided material cannot take the place of evidence in the record.

In Appellant's Arguments section 2, Appellant argues that the extruded material of the claimed invention obtains the desired properties via inorganic loading above 60% by weight and with biaxial stretch ratios greater than 3. In response, the Examiner notes such weight requirements of the invention are not claimed.

In Appellant's Arguments section 2, Appellant argues that Matsumoto teaches no examples of the claimed composition of inorganic loading, biaxial stretching, and monolayer film. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In Appellant's Arguments section 2, Appellant argues that the motivation for combining is a selective picking of teachings within the combined references only made possible by hindsight. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this combination, the motivation as cited, is to modify Matsumoto to further have absorbency properties which efficiently absorb printed inks without the need of

multiple processing steps or multiple coated layers (see Laney col. 2, line 62 through col. 3, line 1).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Patrick Butler/

Examiner, Art Unit 1791

Conferees:

/Yogendra N Gupta/

Supervisory Patent Examiner, Art Unit 1791

/Jennifer Michener/

QAS, TC1700